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WHAT IS CLAIMED IS:

1. A sensor array comprising:
a substrate; and
a plurality of piezoelectric oscillators fixed on a main surface of the substrate in a matrix form, each of the piezoelectric oscillators comprising:
a plurality of piezoelectric layers laminated in a direction parallel to the main surface of the substrate;
inner electrodes disposed between the plurality of piezoelectric layers; and
outer electrodes formed on end faces of the plurality of piezoelectric layers.

2. A method for manufacturing the sensor array according to Claim 1, comprising the steps of:
forming a multi-layer structure in which a plurality of piezoelectric layers and a plurality of inner electrodes are laminated;
forming a motherboard by cutting the multi-layer structure in the laminated direction;
forming outer electrodes on both main surfaces of the motherboard;
fixing the motherboard on a main surface of a

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3. An ultrasonic diagnostic apparatus comprising an ultrasonic probe, wherein the ultrasonic probe comprises the sensor array according to Claim 1.

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